

## FEATURES

VELA SPRINT is a hydraulic barrier (2, 3, 4, 5 m) recommended for all access points which require a high opening/closing speed (parking lots, motorways, airports, etc.) and frequent use features. The automation includes an anti-crush security system which guarantees a barrier force value not exceeding 15 Kg, thus protecting people and objects from any accidents. A highly reliable slowdown device guarantees the total control of the forces of inertia. The release system allows the manual opening in case of emergency

## MAIN COMPONENTS

- 1 Limit switch cam for microswitch intervention (OPTIONAL)
- 2 Limit switch microswitch for slowing down time adjustment (OPTIONAL)
- 3 Galvanized steel rocker arm
- 4 Casing cover equipped with lock and personalized key
- 5 Balancing spring (available in different sizes to support the torque of the different beam lengths (see *Spring Table*))
- 6 Electric fan for forced air conveyance (RAPID VERSION ONLY)
- 7 Electronic card for programming and managing all operating and safety systems
- 8 Foundation plate made of galvanized steel sheet
- 9 Hydraulic unit temperature sensor for cooling fan activation (OPTIONAL)
- 10 Movement system with double-acting hydraulic piston and rocker arm
- 11 Hydraulic unit equipped with release screw for manual releasing in case of emergency, and two screws for torque adjustment
- 12 Casing made of cathaphoresis treated steel sheet with epoxy powder coating  
***Stainless Steel Casing On Request***
- 13 Extruded aluminum beam (available lengths: from 2 to 5 meters)

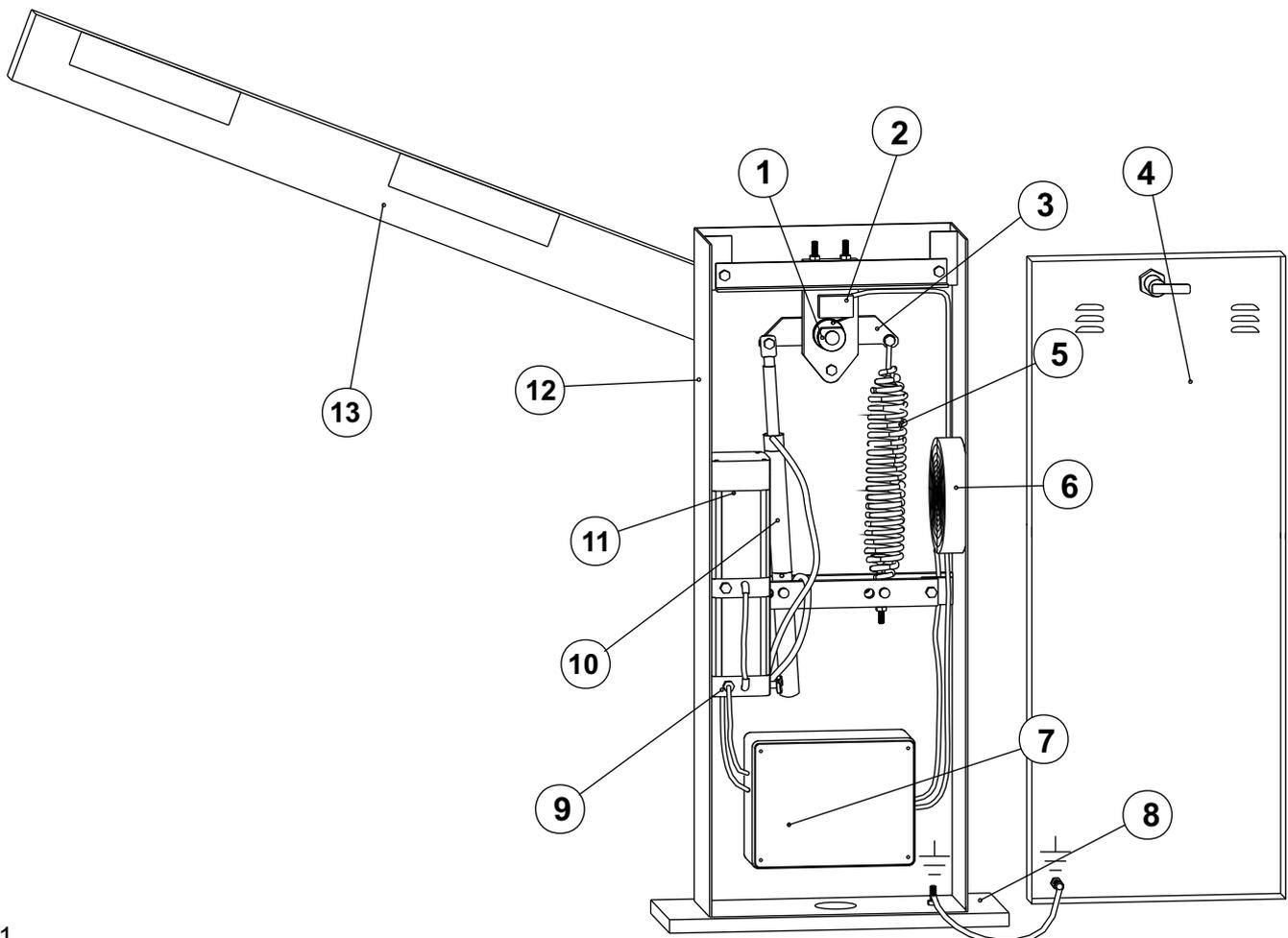
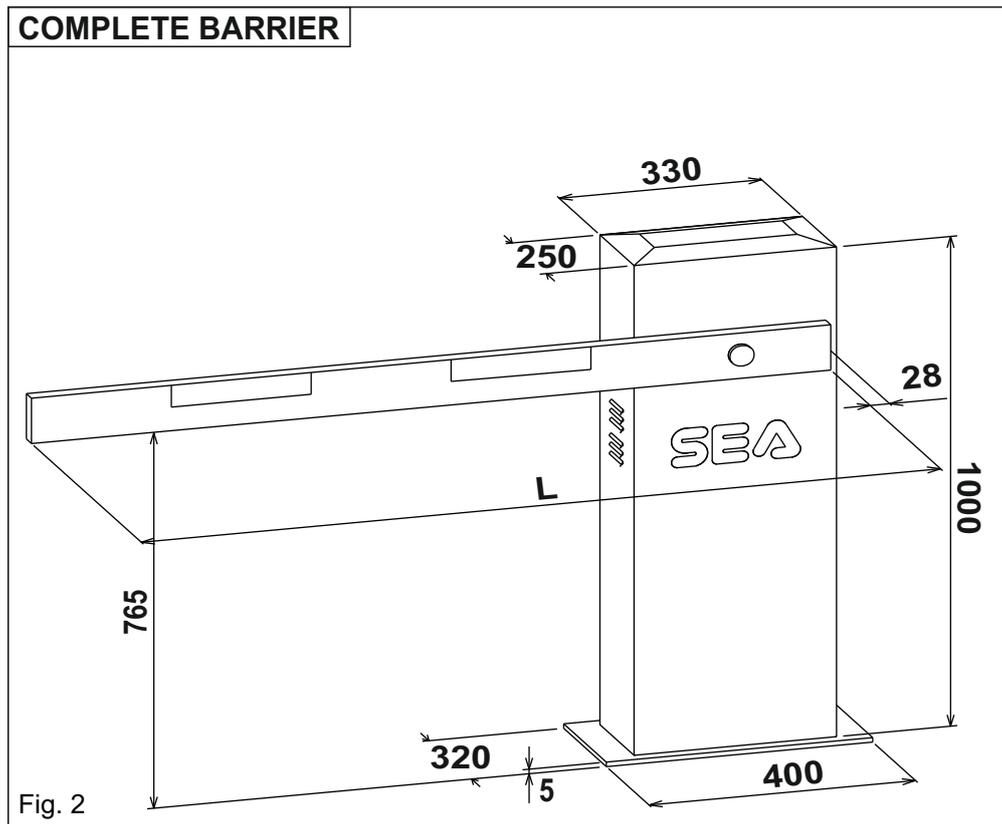


Fig. 1

## DIMENSIONS



## TECHNICAL FEATURES

DATA	VELA SPRINT 230V - 1 LITER	VELA SPRINT 230V - 1,5 LITRES	VELA SPRINT 230V IV - 1,5 LITRES
Supply voltage	230V~ ± 5% - 50/60 Hz		
Hydraulic unit supply voltage	230V		
Absorbed power	1,0 A		
Motor power	220 W		
Motor speed	1430 rpm		
Working temperature	- 20°C ↯ +55°C ↯		
Opening/closing time	8"	5"	ADJUSTABLE FROM 4" TO 7"
Protection class	IP 55		
Manual release system	YES		
Usage frequency	75%		100%
Anti-crushing device	BY-PASS VALVES		
Holding block	YES		
Slowdown	ELECTRONIC		
Barrier body treatment	CATAPHORESIS TREATMENT AND POLYESTER PAINTING		
Max. Length	5 METRES		5 METRES
Thermal protection switch	130°		
Starting capacitor	6,3 µF		—
Pump capacity	1 LITRES		1,5 LITRES
Weight	51 Kg		
Electronic equipment	GATE 1 DG		UNIGATE 1-I

### Notes:

*The frequency of use is valid only for the first hour at 20°C room temperature*

*The frequency of use is valid only if all beam length parameters and speed are respected: see the schemes above and those in the next page*

BEAM SPEED (For VELA SPRINT 230V IV only)						
Spring Diameter	Spring Code	Beam Length	Beam Type	Minimum Opening Time	Default Opening Time	Spring Hook Color
6	1640008	3 m	LIGHT-TH	4"	5"	Yellow
7	16400015	4 m	LIGHT-TH	5,5"	6,5"	Blue
8	16400026	5 m	LIGHT-TH	7"	8"	Pink

**NOTE:**  
*The speed setting must comply with the minimum value indicated in the "Minimum Opening Time" column, which varies according to the beam length;  
 DO NOT set values lower than the indicated minimum*

SPRINGS FOR «LIGHT» BEAM		
Beam Length	Spring Diameter	Spring Code
2	5,5	16400005
2,5	6	16400008
3	6	16400008
3,5	7	16400015
4	7	16400015
4,5	8	16400026
5	8	16400026

## INSTALLATION

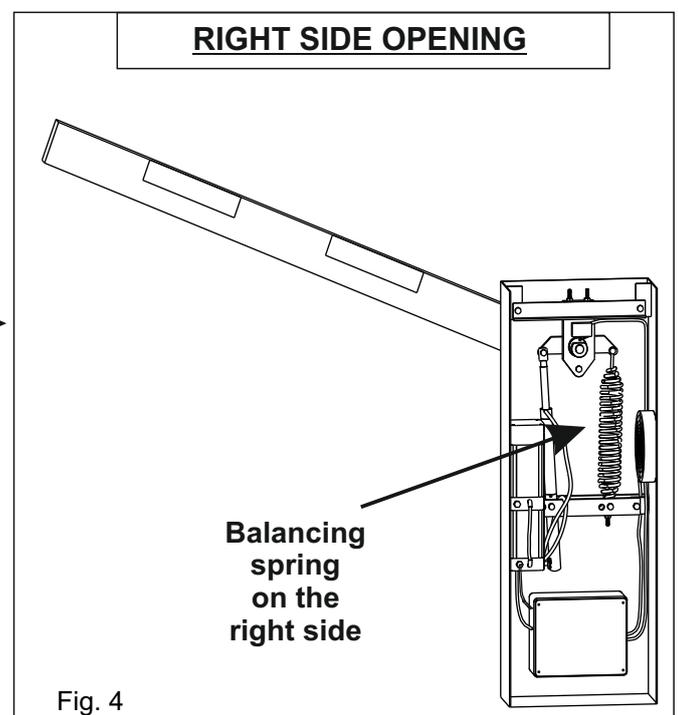
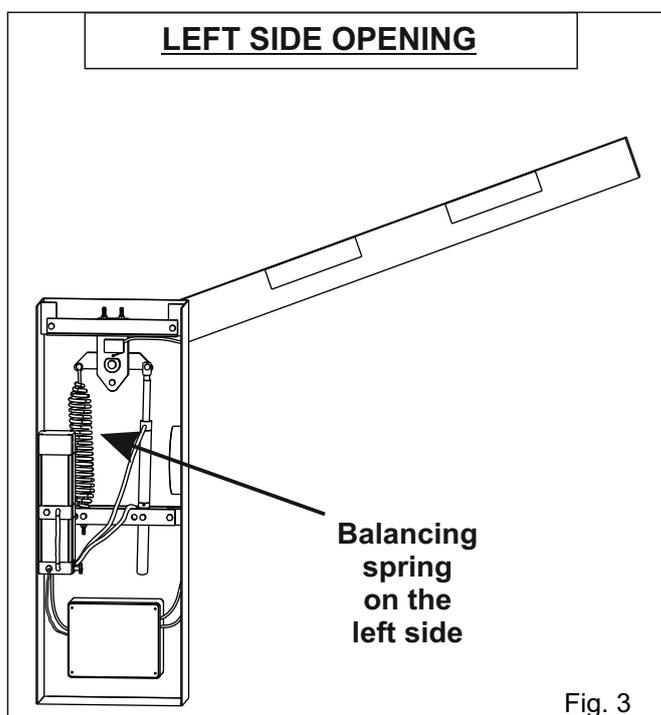
### 1 - BALANCING SPRING POSITION

The excellent flexibility of the barrier you are installing allows the closing of the beam on the right or on the left side of the barrier, depending on your needs

**If the spring is installed on the left, the beam opening will be towards the left (Fig. 3)**

**If the spring is installed on the right, the beam opening will be towards the right (Fig. 4)**

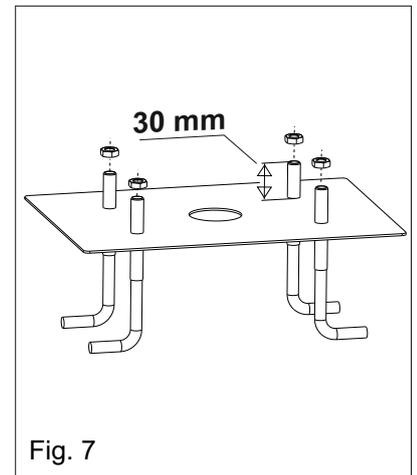
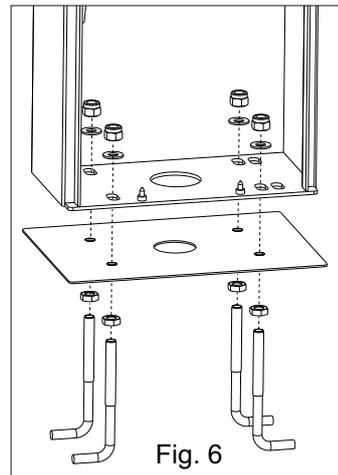
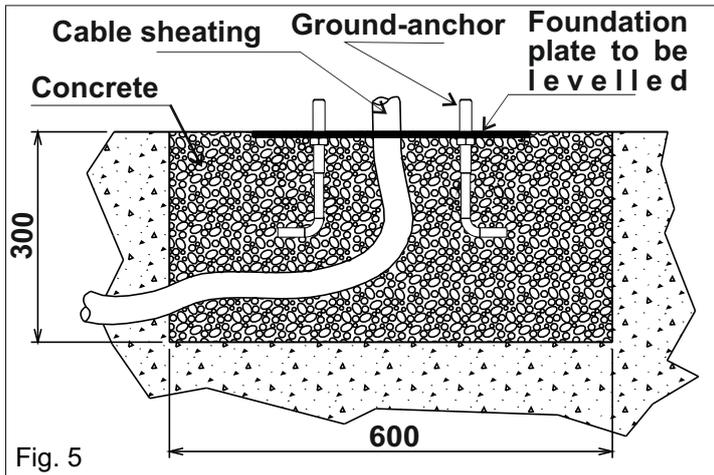
**FOR THE SPRING ASSEMBLY PROCEDURE, REFER TO THE POINT 4**



## 2 - FOUNDATION PLATE ANCHORING

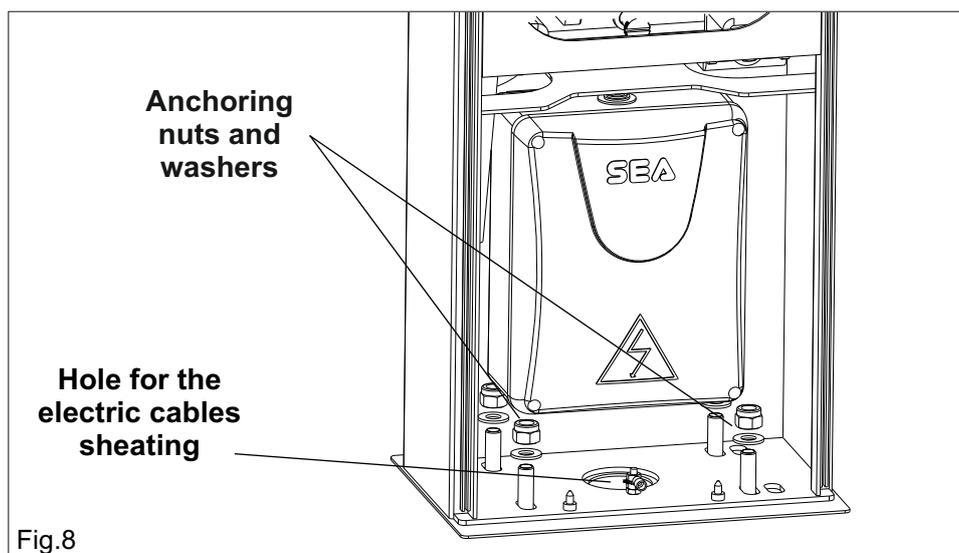
- Make a 600 x 600 x 300 mm (depth) hole in the ground
- Fill the hole with R425 concrete and place the foundation plate as shown in Fig. 5
- Accurately level the plate

**CAUTION:** The foundation plate is equipped with a hole in the middle for the passage of electric cables; make sure that a sheath for electrical cables complying with current regulations passes through the hole before filling with the concrete



## 3 - CASING ANCHORING ON THE FOUNDATION PLATE

- Place the casing so that the holes on the base match the screws located on the foundation plate
- Make sure that the sheathing for cables passes through the large hole on the casing base
- Fix the casing to the foundation plate, screwing the supplied nuts and washers carefully



## 4 - BALANCING SPRING MOUNTING

The barrier is supplied prepared for the left side opening as standard (Fig. 3)

Before installing the spring, check the opening direction of the beam, whether to the right or left (Fig. 3 and Fig. 4)

**If the barrier must open to the right, in addition to the spring mounting on the correct side, it is necessary to reverse the piston from the right side to the left side making it rotate on itself by 360 ° in order to release it from the connecting pipes between control unit and piston and prevent them from intertwining**

**CAUTION:** Before performing this operation, release the actuator and loosen the two fittings of the connection pipes between the hydraulic unit and the hydraulic piston by half a turn to facilitate the inversion (only on the hydraulic unit) taking care not cause constrictions on the flexible pipes

1- Remove the fixing screws of the spring and the piston

2- Remove the bracket after removing screws and nuts

3- Position the piston on the desired CLOSING side of the beam (at the place of the spring) and secure it to the rocker arm using the screw

**Once the piston has been rotated, tighten it with the fixing screws and lubricate everything with grease (Fig. 10) (use DIN 51502 KP 2 N-20 - K 2 K-20 grease)**

4- Position the spring at the place of the piston and fix it to the rocker arm, lubricating with grease (Fig. 0)

5- Reposition the bracket considering that the outermost holes are reserved for the spring anchor pin, while the innermost ones are reserved for the piston anchor pin (both in case of right side or left side beam closing)

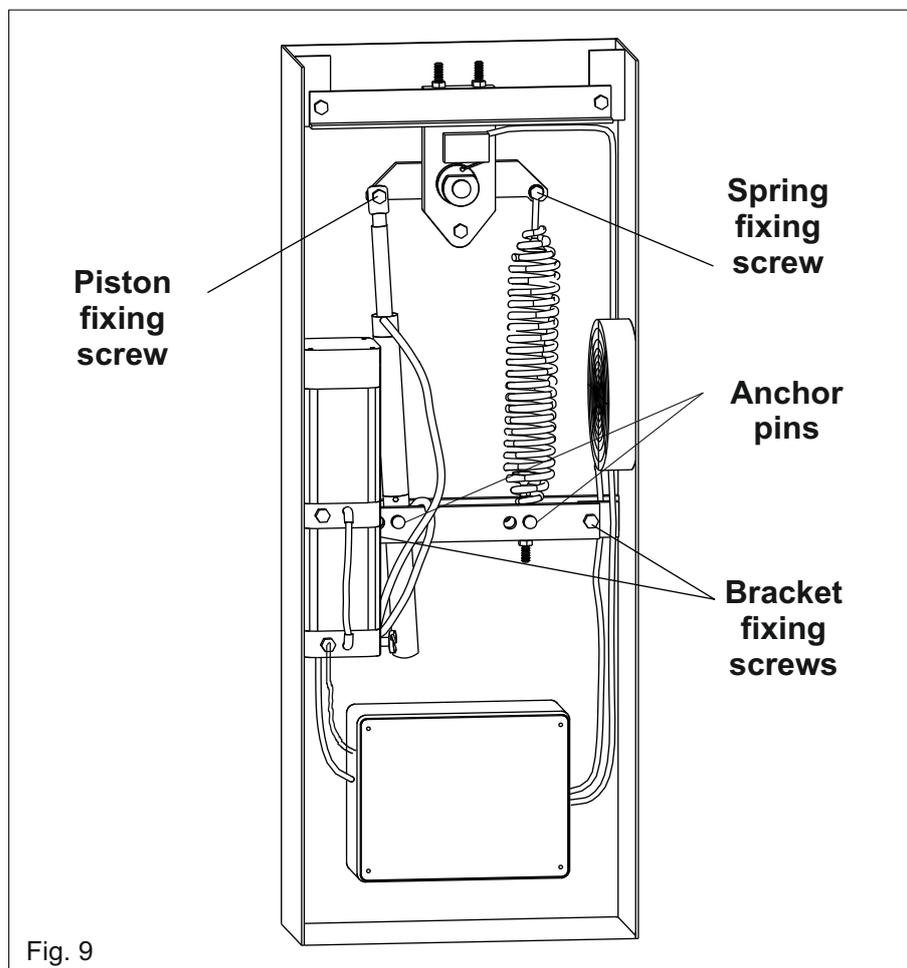


Fig. 9

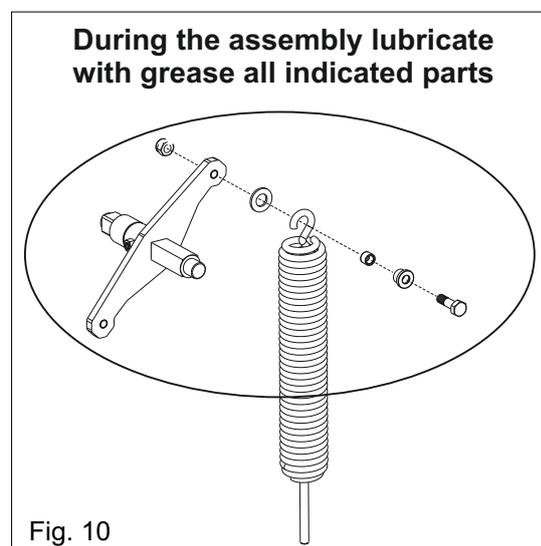


Fig. 10

## 5 - «LIGHT» BEAM ASSEMBLY

**CAUTION:** For 4 m and 5 m length beams we recommend installing the fork support on the ground (at the closing point of the beam) or the folding support to install on the beam itself

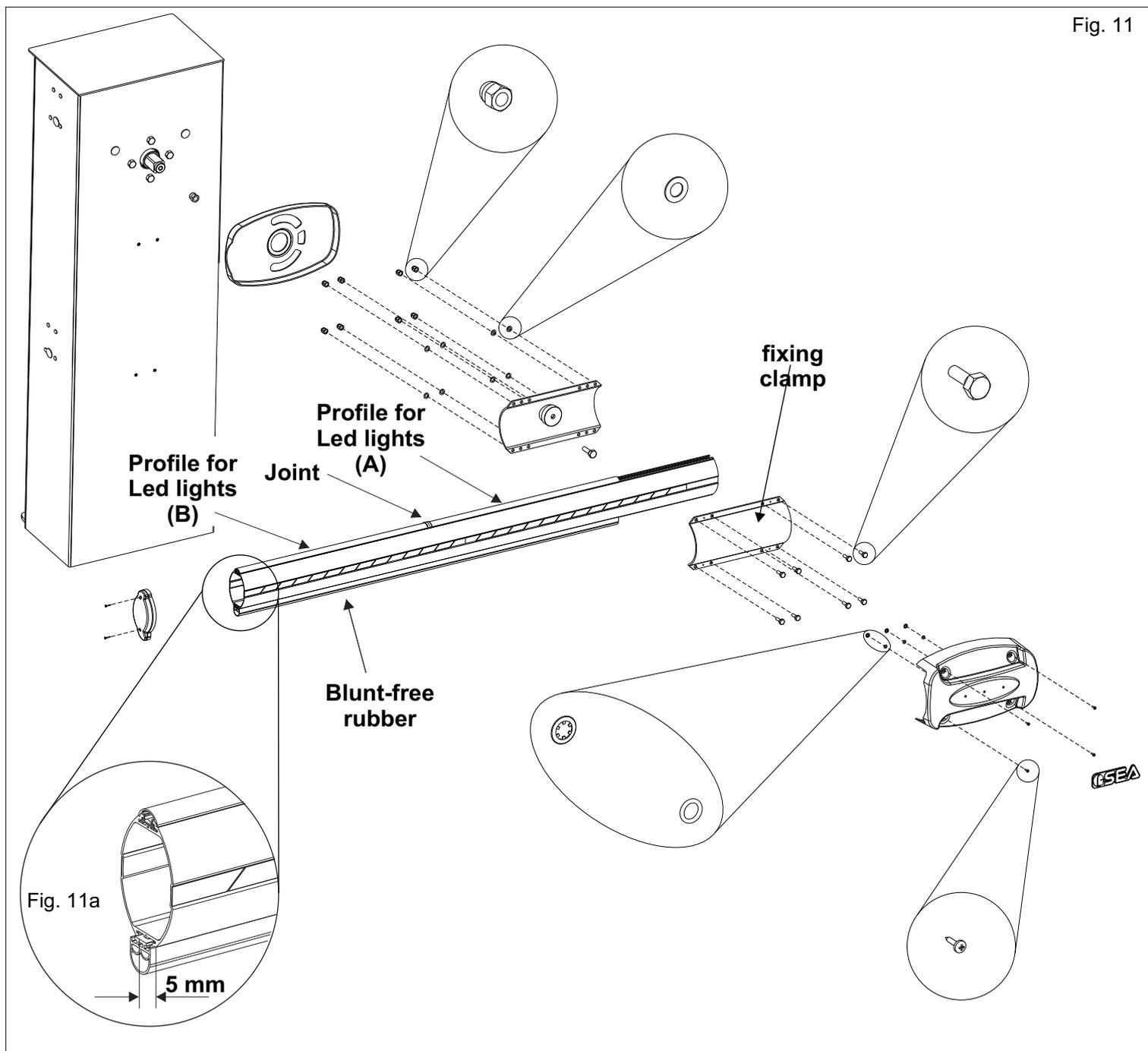


Fig. 11

- Mount the first segment **(A)** of the profile for the insertion of the Led lights, positioning it on the fixing clamp end-point

- Mount the joint

**NOTE: It is important to space-out each segment of the profile for Leds with the joint**

- Mount the second segment **(B)** of the profile for Leds

- Repeat the operation for all segments of the profile for Leds until covering the beam length

**WARNING: The last Led profile must be cut with a hacksaw at the end of the beam (Fig. 11a)**

- Mount the blunt-free rubber in the lower part of the beam, making it protrude by 5 mm at the end of the beam, as shown in Fig. 11a

## **6 - SKIRT ASSEMBLY ON THE BEAM**

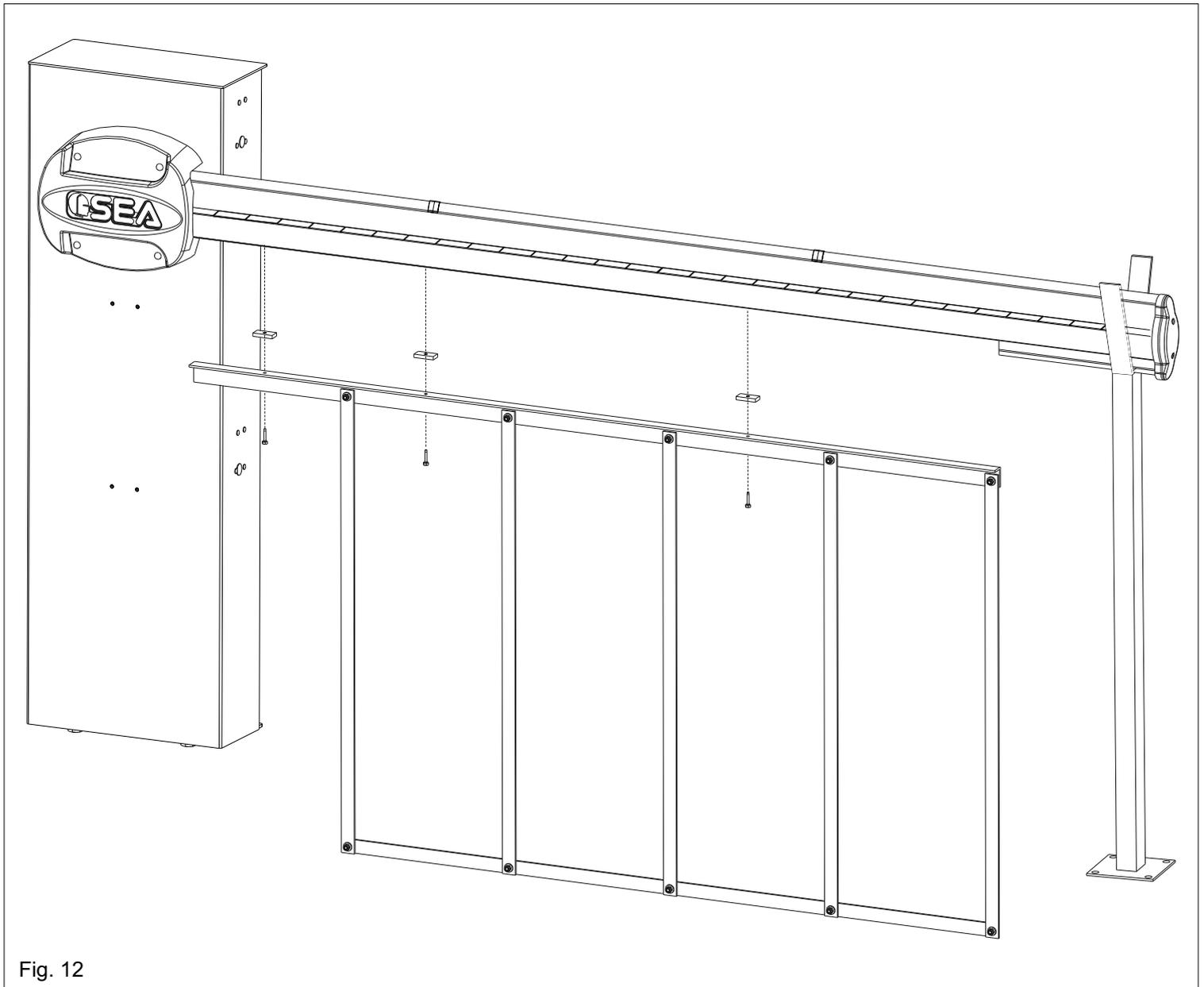


Fig. 12

## 7 - BEAM BALANCING

- Release the operator with manual release, so that beam is free to be open and closed manually (Fig. 13)
- Place the beam at approximately 45°
- Loosen or tighten the spring stretching nut until the spring counterbalances the weight of the 45° beam (Fig. 13). The best balancing position is when the beam reaches and stays in the position shown in Fig. 13
- After having obtained the balancing, lock the spring stretching nut with the counter nut and re-block the operator

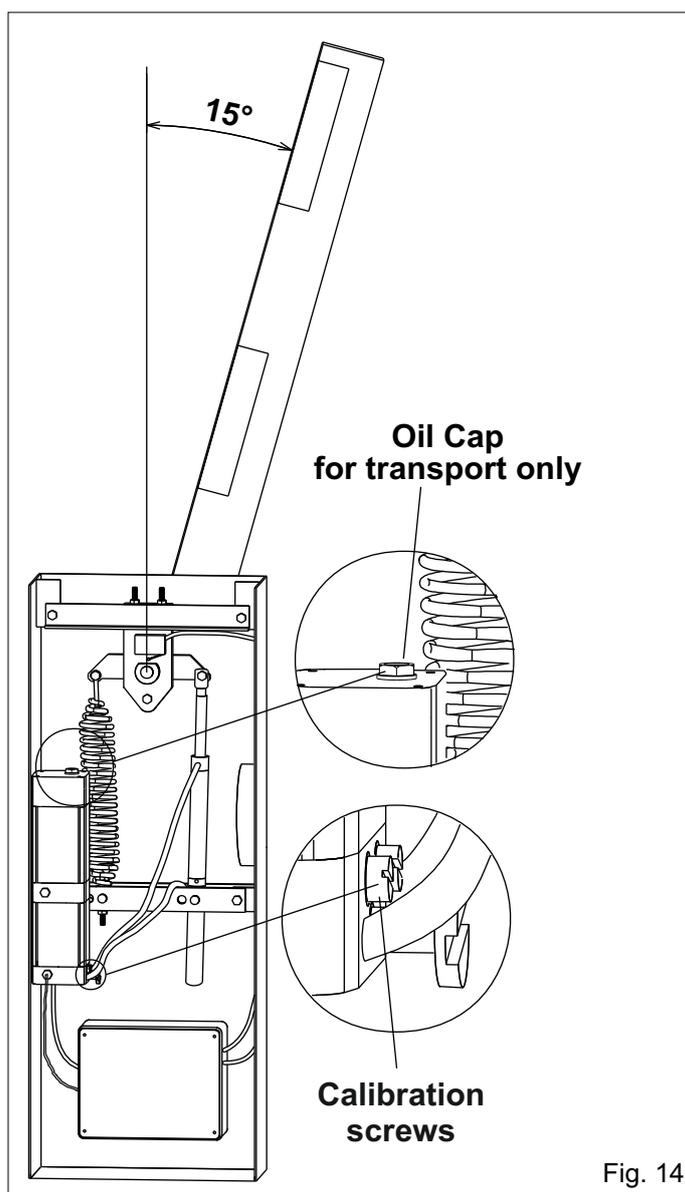


Fig. 14

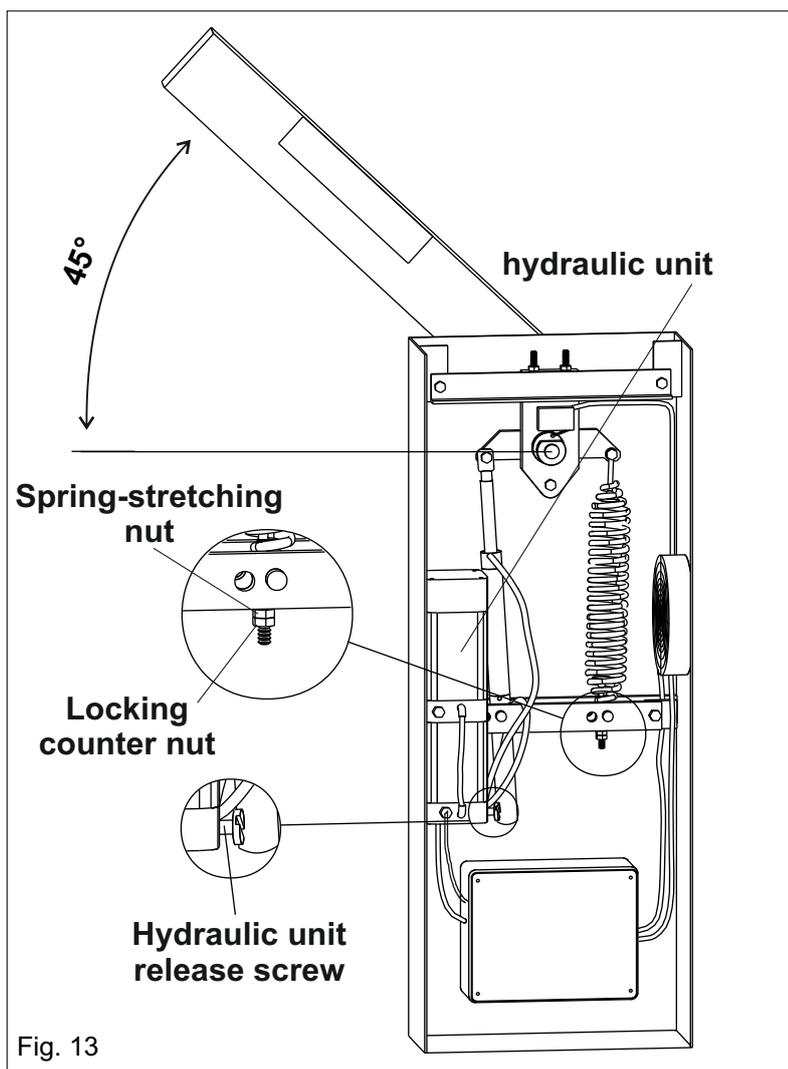


Fig. 13

## 8 - THRUST ADJUSTMENT

If necessary, the piston thrust force can be adjusted through the two calibration screws (gray to open and yellow to close) placed on the hydraulic unit side (Fig. 14).

### WARNING

The automation is factory adjusted to a force of 15 Kg to guarantee the anti-crushing safety, therefore it is recommended to not alter this adjustment except in case of absolute necessity

**WARNING:**  
**BEFORE STARTING THE VELA SPRINT BARRIER IT IS NECESSARY TO REPLACE THE OIL CAP FOR TRANSPORT WITH THE DRILLED ONE SUPPLIED**

## 9 - BEAM LEVELLING

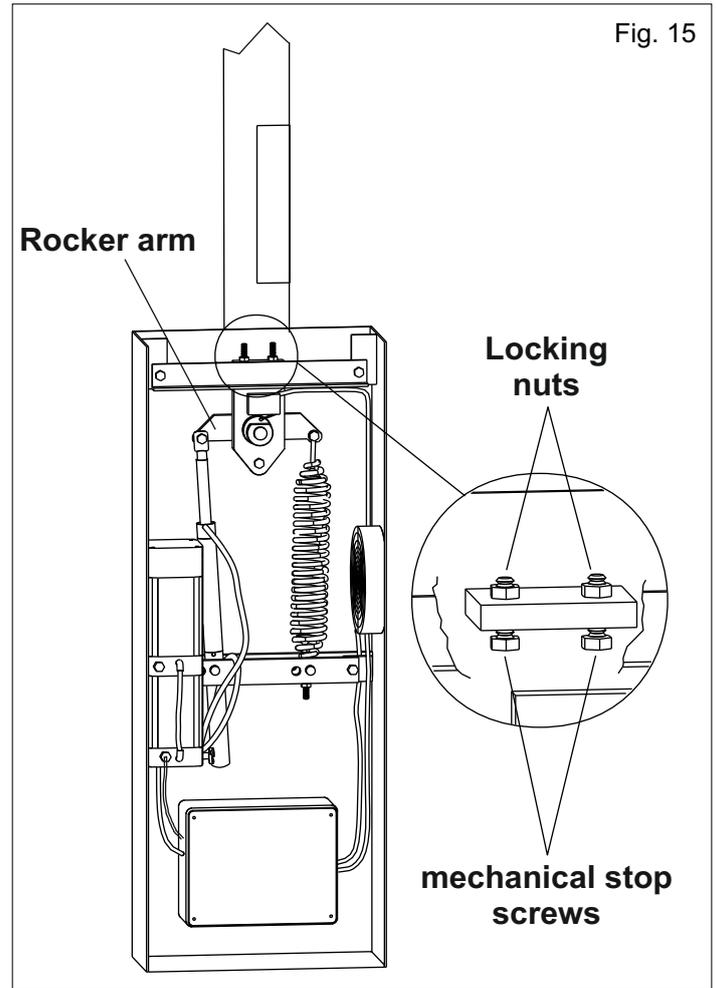
**WARNING:** This operation must be carried out only if the beam is not perfectly horizontal (in closing position) or vertical (in opening position) at the end of its stroke

- Release the operator with manual release, so that beam is free to be open and closed manually

Release the mechanical stops screws by unscrewing the locking nuts on the mechanical stops

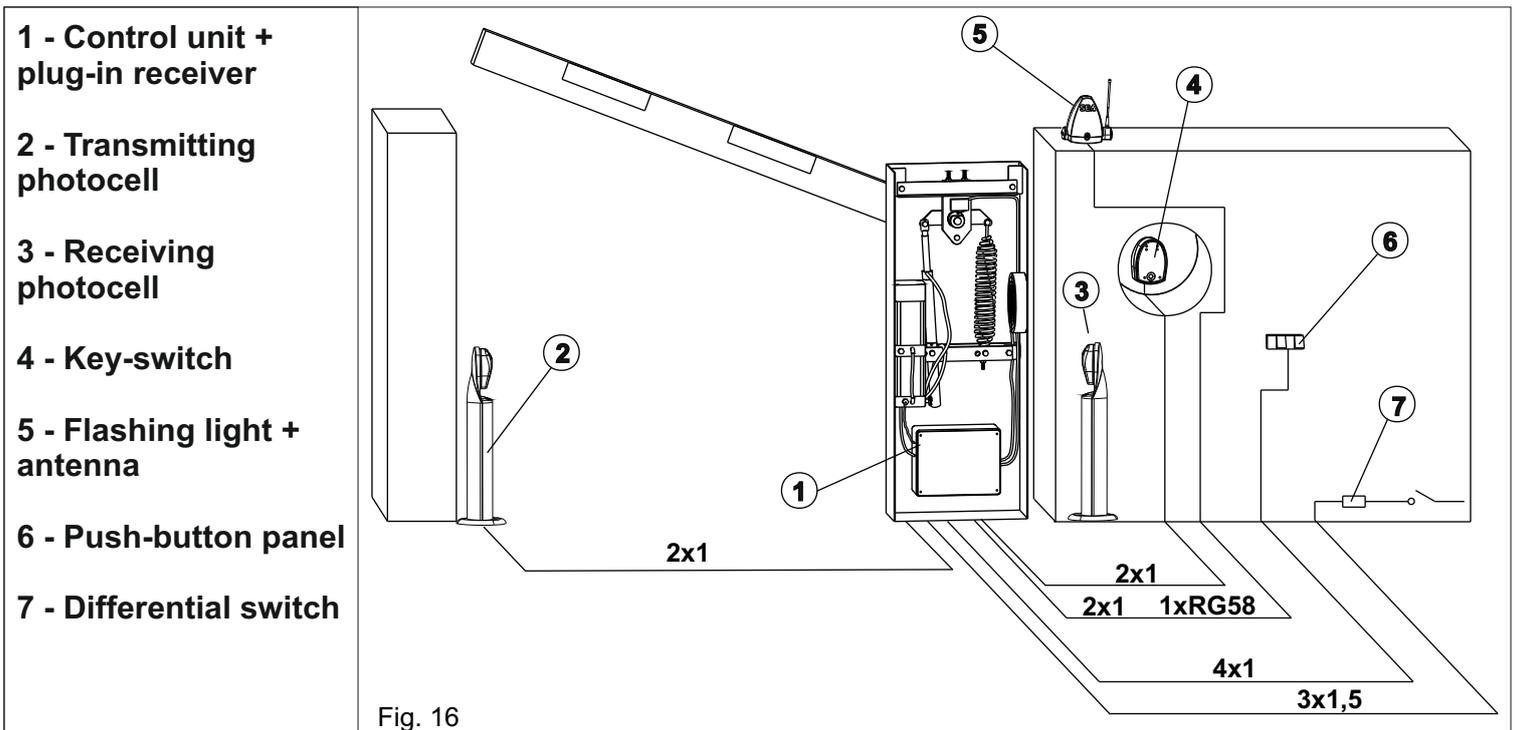
- Loosen or tighten the mechanical stops screws so that the beam is released in its vertical position (opening position) and horizontal position (closing position)

- After having executed the levelling, lock the screws of the mechanical stops by tightening the nuts and re-lock



## 10 - ELECTRICAL SYSTEM

In the Fig. 16 it is shown a typical layout of the electrical system the barrier requires; The numbers shown in correspondence with the electric cables indicate, respectively, the quantity of cables and their selection



## To the attention of users and technicians

### WARNINGS

The electrical installation and the operation logics must comply with current regulations. Keep the power cables (motors, power supply) separated from the control cables (push-buttons, photocells, radio, etc.). Separate conduits should be used to prevent noise issues. **Note: Use “cable-glands” and/or “pipes/sheatings” close to the control panel box so to protect the interconnection cables against pulling efforts**

### INTENDED USE

The operator has been designed exclusively for the automation of barriers.

### SPARE PARTS

The spare parts orders must be sent to: **SEA S.p.A. - 64100, Sant’Atto - TERAMO - ITALY - [www.seateam.com](http://www.seateam.com)**

### SAFETY AND RESPECT FOR THE ENVIRONMENT

We recommend not to spoil the environment with product and circuit packing material.

### STORAGE

STORAGE TEMPERATURE			
$T_{min}$	$T_{max}$	Humidity <sub>min</sub>	Humidity <sub>max</sub>
<b>-30°C</b>	<b>+60°C</b>	<b>5% without condensation</b>	<b>90% without condensation</b>

The product must be handled using suitable means.

### LONG-TERM STOP AND MAINTENANCE

The disassembly and/or stop and /or maintenance of the automation system must be carried out by skilled and expert technicians.

### GUARANTEE LIMITS

For the guarantee see the sales conditions on the official SEA price list.

**NOTE: THE MANUFACTURER SHALL NOT SHOULD ANY RESPONSIBILITIES IN CASE OF DAMAGE CAUSED BY INAPPROPRIATE, WRONG OR CARELESS USE.**

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*SEA reserves the right to make all the necessary changes and modifications of the products or manuals without giving prior notice*

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